

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 62065921
PUBLICATION DATE : 25-03-87

APPLICATION DATE : 12-09-85
APPLICATION NUMBER : 60200618

APPLICANT : TOHO TITANIUM CO LTD;

INVENTOR : ONO AKIO;

INT.CL. : C01B 31/30

TITLE : PRODUCTION OF TITANIUM CARBIDE

ABSTRACT : PURPOSE: To produce high-purity titanium carbide at a low cost by using high- purity titanium tetrachloride as a raw material and using magnesium as the reducing agent.

CONSTITUTION: Titanium tetrachloride, a carbon-contg. substance and magnesium are allowed to react with one another at 700~1,300°C in an inert atmosphere to form titanium carbide. Then magnesium and magnesium chloride are separated at 800~1,200°C by vacuum filtration. Then the titanium carbide is heated at 1,500~2,500°C.

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STN CA Caesar accession number : 1062

AN - 1987:579480 CAPLUS

DN - 107:179480

ED - Entered STN: 14 Nov 1987

TI - Manufacture of titanium carbide

IN - Murayama, Ryoji; Takemura, Seiichi; Sudo, Osamu; Takeda, Yutaka; Yamashita, Akishi; Okawa, Tsutomu; Ono, Akio

PA - Toho Titanium Co., Ltd., Japan

SO - Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT - Patent

LA - Japanese

IC - ICM C01B031-30

CC - 49-5 (Industrial Inorganic Chemicals)

Section cross-reference(s): 57

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PN - JP62065921	A2	19870325	JP 1985-200618	19850912
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PRAI- JP 1985-200618	19850912
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 62065921	ICM C01B031-30
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OS - CASREACT 107:179480

AB - TiCl₄ is treated with C-contg. compds. and Mg in inert gas at 700-1300.degree. to give Ti carbide; Mg and Mg chloride is vacuum-sepd. at 800-1200.degree.; and then the product is further heated at 1500-2500.degree. in inert gas or under reduced pressure. Ti carbide, useful as ceramic tools, cermets, raw materials for powder metallurgy, etc., is prepd. from byproduct from Ti manuf. Thus, TiCl₄ and CCl₄ were added dropwise, in 7 h, to a tube contg. Mg and Ar (heated to 800.degree.) and then cooled. Mg and Mg chloride were removed from the product by vacuum-sepn., the product was pulverized, molded, and heated 3 h at 1800.degree. in 10-2 Pa to give Ti carbide contg. free C 0.02, bonded C 19.00, O 0.02, and Mg 0.002%.

ST - titanium carbide ; magnesium reducing agent titanium chloride

IT - Carbon black, reactions

RL: RCT (Reactant) ; RACT (Reactant or reagent)
(reaction of, with titanium chloride, for titanium carbide prepn., in presence of magnesium)

IT - 7439-95-4 , Magnesium, uses and miscellaneous

RL: USES (Uses)

(in titanium carbide prepn., from titanium chloride and carbon compd.)

IT - 12070-08-5P , Titanium carbide (TiC)

RL: PREP (Preparation)

(prepn. of, from, titanium chloride and carbon compd., in the presence of magnesium)

IT - 7550-45-0, reactions

RL: RCT (Reactant) ; RACT (Reactant or reagent)

(reaction of, with carbon compds., in the presence of magnesium, for